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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/525,195 | 02/18/2005 | Christian K. Bottger | 122410 | 3948 |
| 25944 | 7590 | 09/08/2005 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | SINGH, ARTI R | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1771 | |

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

T.D

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/525,195 | Applicant(s) BOTTGER ET AL. | |
| | Examiner Ms. Arti Singh | Art Unit 1771 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>feb 2005</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Claim Objections

1. Claims 1-23 are objected to because of the following informalities: in claim 1 Applicant is claiming a material comprising at least one layer.....the layer comprising a first and a second layer of woven fabric.” It is suggested for the purposes of clarity that Applicant amend this to state “A composite comprising a first and second layer...”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the independent claim Applicant discloses a ratio to be >1. these ratios are indefinite because ratios are characteristically represented as a comparison between to given factors such as 1:2 or 1 to 2, and thus as presently claimed it does not seem to constitute a proper ratios. These same ratios are also present in claims 6-8. All other claims are objected to as being based on a rejected Claim 1.

4. Additionally, in claim 1, Applicant discloses that the first layer comprises at least 65% of the fabric weight, and the second layer can also be at least 65% of the total fabric weight. How is this possible? If added together and both layers were at least 65%, then the total fabric weight would equal 130. Correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable in view of WO 00/42246 in view of USPN 5471906 issued to Bachner et al further in view of WO 92/01108 issued to Stephenson et al.

1. WO 00/42246 discloses penetration resistant material comprising fabric having two sets of threads. The double layer of fabric is composed of two layers of woven fabric, which are cross-plied at an angle. The fabric is composed of a first set of threads comprising 3.5-20 threads/cm and has a linear density of at least 420 dtex, and the second set of threads comprising 0.5 to 8 threads/cm and having a linear density of at least 50 dtex. The ratio of the linear density of the first set of threads to the linear density of the second set of threads is >4.2 , more preferably >7.5 . In a preferred embodiment, the first set of threads is made of p-aramid yarn and the second set of threads is polyester yarn, and the ratio of the number of threads/cm of the first set to that of the second set is >1 (abstract). The two fabric layers are bonded together with an adhesive material that includes thermoplastic, elastomeric, and thermoset materials (pg 3, ln 15-21). The first set of threads are preferably warp threads and the second set of threads are preferably weft threads (pg 2, ln 21-30). The outer sides of the penetration-resistant material is provided with a protective layer (pg 3, ln 31-32). The

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penetration resistant material may contain as little as one double layer consisting of two layers of woven fabric, but usually more double layers are applied (page 4, ln 10-12).

While WO '246 discloses a first and second fabric with first and second threads, it fails to disclose that the first fabric is composed of first and second threads or that the second fabric is composed of first and second threads. It would have been obvious to one having ordinary skill in the art to have made the first fabric of WO '246 comprise first and second threads and to have made the second fabric of WO '246 comprises first and second threads, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. It also has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. One having ordinary skill in the art would have duplicated and rearranged -made the plies parallel to one another instead of cross plying them the fabric of WO '246, motivated by the desire to create a fabric having increased and enhanced ballistic resistance. The WO 00/4226 teaches what is set forth above but does not teach the waterproofing factor required by the claims.

Bachner teaches improving ballistic armor by applying a waterproof coating to the composite and thereby making it more breathable and flexible. Bachner uses sheets of fluorocarbons to accomplish this (column 4, line 46). Bachner does not specifically teach using a fluoroacrylate.

WO 92/01108 teaches applying a fluorinated methacrylate to an aramid fiber, which remedies Bachner's deficiency. Thus a person having ordinary skill in the art at the time the invention was made would have found it obvious to use the specific methacrylate co polymer as the waterproofing agent in the coating. One would have been motivated to chose this

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specific methacrylate as it is especially preferred to treat aramid fibers which result in a high degree of wet ballistic protection (abstract).

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-23 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending Application No. 10/471089 and USPN's 6662369, 6610618 and 6890871 in view of USPN 5471906 or WO 92/01108 . Although the conflicting claims are not identical, they are not patentably distinct from each other because they all appear to be obvious variants of one another. Additionally, USPN 5471906 teaches the use of waterproof coatings on body armor and a skilled artisan would have found it obvious to add the waterproof coating to the composites. One would have been motivated to do this to create body armor that was more flexible and more breathable as shown in column 2. WO/92/01108 teaches the use of fluoroacylates in their waterproof coatings.

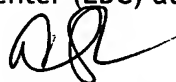
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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Arti Singh whose telephone number is 571-272-1483. The examiner can normally be reached on M-F 9-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ms. Arti Singh
Primary Examiner
Art Unit 1771

Ars 09/06/05